

5 TM Search

FILE 'HOME' ENTERED AT 09:15:40 ON 22 JUL 2004

L1 QUE (BACTERIOCIN OR LANTIBIOTIC OR LANTHIONINE OR MAILLARD OR NISIN) AND (METAL OR COBALT OR CHELAT##### OR COPPER OR ZINC)
L3 1489 L1 AND (LANTIBIOTIC OR LANTHIONINE OR MAILLARD OR NISIN) AND (METAL OR COBALT OR CHELAT#####)
L4 801 L1 AND (BACTERIOCIN OR LANTIBIOTIC OR LANTHIONINE OR MAILLARD OR NISIN) (P) (METAL OR COBALT OR CHELAT##### OR COPPER OR ZINC)
L10 54 L1 AND LANTHIONINE AND (LANTHIONINE OR NISIN OR LAN) (P) (CHELAT##### OR COBALT OR METAL)

his

(FILE 'HOME' ENTERED AT 09:15:40 ON 22 JUL 2004)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU, DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 09:16:00 ON 22 JUL 2004

SEA (BACTERIOCIN OR LANTIBIOTIC OR LANTHIONINE OR MAILLARD OR N

1 FILE ADISINSIGHT
1 FILE ADISNEWS
54 FILE AGRICOLA
4 FILE ANABSTR
4 FILE AQUASCI
66 FILE BIOBUSINESS
3 FILE BIOCOMMERCE
158 FILE BIOSIS
8 FILE BIOTECHABS
8 FILE BIOTECHDS
50 FILE BIOTECHNO
84 FILE CABA
7 FILE CANCERLIT
303 FILE CAPLUS
3 FILE CEABA-VTB
10 FILE CEN
1 FILE CROPB
2 FILE CROPU
24 FILE DISSABS
4 FILE DDFB
3 FILE DDFU
9 FILE DGENE
4 FILE DRUGB
4 FILE DRUGU
1 FILE EMBAL
85 FILE EMBASE
73 FILE ESBIODASE
20 FILE FEDRIP
122 FILE FROSTI
87 FILE FSTA
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64 FILE IFIPAT
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48 FILE LIFESCI
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4 FILE NTIS
1 FILE OCEAN

97 FILE PASCAL
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 1 FILE PROUSDDR
 1 FILE RDISCLOSURE
 207 FILE SCISEARCH
 131 FILE TOXCENTER
 1167 FILE USPATFULL
 90 FILE USPAT2
 1 FILE VETB
 1 FILE VETU
 71 FILE WPIDS
 71 FILE WPINDEX
 13 FILE BABS
 19 FILE INVESTEXT
 1 FILE NAPRALERT

L1 QUE (BACTERIOCIN OR LANTIBIOTIC OR LANTHIONINE OR MAILLARD OR N

FILE 'MEDLINE, PASCAL, FROSTI, USPATFULL, BIOSIS, SCISEARCH, TOXCENTER'
 ENTERED AT 09:21:44 ON 22 JUL 2004

L2 2010 S L1
 L3 1489 S L1 AND (LANTIBIOTIC OR LANTHIONINE OR MAILLARD OR NISIN) AND
 L4 801 S L1 AND (BACTERIOCIN OR LANTIBIOTIC OR LANTHIONINE OR MAILLARD
 L5 592 S L3 AND L4
 L6 351 DUP REM L5 (241 DUPLICATES REMOVED)
 L7 14 S L6 AND NISIN AND COBALT
 L8 42 S L1 AND LANTHIONINE (P) (CHELAT##### OR COBALT OR METAL)
 L9 41 S L8 NOT L7
 L10 54 S L1 AND LANTHIONINE AND (LANTHIONINE OR NISIN OR LAN) (P) (CHE
 L11 54 S (L10 OR L9)
 L12 42 S L11 NOT PY>2002

(

L7 ANSWER 5 OF 14 USPATFULL on STN
 AN 2003:250422 USPATFULL
 TI **Bacteriocin-metal** complexes in the detection of
 pathogens and other biological analytes
 IN Olstein, Alan D., Mendota Heights, MN, UNITED STATES
 Feirtag, Joellen, St. Paul, MN, UNITED STATES
 PI US 2003175207 A1 20030918
 AI US 2002-82618 A1 20020222 (10)
 DT Utility
 FS APPLICATION
 LREP REED & EBERLE LLP, 800 MENLO AVENUE, SUITE 210, MENLO PARK, CA, 94025
 CLMN Number of Claims: 72
 ECL Exemplary Claim: 1
 DRWN 3 Drawing Page(s)
 LN.CNT 1973
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB Complexes of **bacteriocins** and **metals** are provided
 that are useful in detecting bacteria, fungi and other biological
 analytes, and are particularly useful in detecting gram positive
 bacteria. The complexes are preferably **chelated** complexes
 wherein the **bacteriocin** is a **lantibiotic**, non-
lanthionine containing peptide, large heat labile protein and
 complex **bacteriocin**, fusion protein thereof, mixture thereof,
 and fragment, homolog and variant thereof, and (b) a detectable label
 comprising a transition or lanthanide **metal**. The complex
 preferentially binds to viable gram positive or mycobacterial cells. The
 complex can also bind to gram negative bacteria and fungi. Methods of
 using the complexes in assays, diagnosis and imaging are also provided.

L7 ANSWER 14 OF 14 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1974:51170 BIOSIS
 DN PREV197410051170; BR10:51170
 TI EFFECT OF **COBALT**-60 GAMMA RADIATION ON THE STRUCTURE AND
 FUNCTION OF PENICILLIN OXYTETRACYCLINE AND **NISIN**.
 AU GUPTA K G; VYAS K K; SEHKNON N S
 SO (1973) pp. 1973. U N E S C O AND W H O. GLOBAL IMPACTS OF APPLIED
 MICROBIOLOGY. 4TH INTERNATIONAL CONFERENCE IMPACTOS GLOBAIS DA
 MICROBIOLOGIA APLICADA. INCIDENCES MONDIALES DE LA MICROBIOLOGIE
 APPLIQUEE. IMPACTOS GLOBALES DE LA MICROBIOLOGIA APLICADA SAO PAULO,
 BRAZIL, JULY 23-28, 1973. 35P. UNIPUB, INC.: P.O. BOX 433, NEW YORK, N.
 Y., U.S.A.
 DT Book
 FS BR
 LA Unavailable

L12 ANSWER 1 OF 42 MEDLINE on STN
 AN 2000405069 MEDLINE
 DN PubMed ID: 10563973
 TI Chemistry, biochemistry, nutrition, and microbiology of lysinoalanine, **lanthionine**, and histidinoalanine in food and other proteins.
 AU Friedman M
 CS Western Regional Research Center, Agricultural Research Service, U.S. Department of Agriculture, Albany, CA 94710, USA.
 SO Journal of agricultural and food chemistry, (1999 Apr) 47 (4) 1295-319. Ref: 280
 Journal code: 0374755. ISSN: 0021-8561.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals
 EM 200008
 ED Entered STN: 20000901
 Last Updated on STN: 20000901
 Entered Medline: 20000822
 AB Heat and alkali treatments of foods, widely used in food processing, result in the formation of dehydro and cross-linked amino acids such as dehydroalanine, methyldehydroalanine, beta-aminoalanine, lysinoalanine (LAL), ornithinoalanine, histidinoalanine (HAL), phenylethylaminoalanine, **lanthionine (LAN)**, and methyl-**lanthionine** present in proteins and are frequently accompanied by concurrent racemization of L-amino acid isomers to D-analogues. The mechanism of LAL formation is a two-step process: first, hydroxide ion-catalyzed elimination of H(2)S from cystine and H(2)O, phosphate, and glycosidic moieties from serine residues to yield a dehydroalanine intermediate; second, reaction of the double bond of dehydroalanine with the epsilon-NH(2) group of lysine to form LAL. Analogous elimination-addition reactions are postulated to produce the other unusual amino acids. Processing conditions that favor these transformations include high pH, temperature, and exposure time. Factors that minimize LAL formation include the presence of SH-containing amino acids, sodium sulfite, ammonia, biogenic amines, ascorbic acid, citric acid, malic acid, and glucose; dephosphorylation of O-phosphoryl esters; and acylation of epsilon-NH(2) groups of lysine. The presence of LAL residues along a protein chain decreases digestibility and nutritional quality in rodents and primates but enhances nutritional quality in ruminants. LAL has a strong affinity for **copper** and other **metal** ions and is reported to induce enlargement of nuclei of rats and mice but not of primate kidney cells. LAL, **LAN**, and HAL also occur naturally in certain peptide and protein antibiotics (cinnamycin, duramycin, epidermin, **nisin**, and subtilin) and in body organs and tissues (aorta, bone, collagen, dentin, and eye cataracts), where their formation may be a function of the aging process. These findings are not only of theoretical interest but also have practical implications for nutrition, food safety, and health. Further research needs are suggested for each of these categories. These overlapping aspects are discussed in terms of general concepts for a better understanding of the impact of LAL and related compounds in the diet. Such an understanding can lead to improvement in food quality and safety, nutrition, microbiology, and human health.

L12 ANSWER 4 OF 42 FROSTI COPYRIGHT 2004 LFRA on STN
 AN 398871 FROSTI
 TI Stabilized **lanthionine bacteriocin** compositions.

IN Blackburn P.; De La Harpe J.
PA Applied Microbiology Inc.
SO European Patent Application
PI EP 673199 A1
WO 9413143 19940623
DS AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
AI 19931208
PRAI United States 19921208
DT Patent
LA English
SL English
AB A composition containing a **bacteriocin** such as **nisin** and a thioether for stabilisation against degradation is described. The composition may also contain a surfactant and/or a **chelating** agent. The composition has both Gram-positive and Gram-negative bactericidal activity and has several applications as a food preservative.

L12 ANSWER 9 OF 42 USPATFULL on STN
AN 2001:188224 USPATFULL
TI Anti-microbial compositions
IN Johnson, Paula Ann, Wirral, Great Britain
Landa, Andrew Sjaak, Wirral, Great Britain
Makin, Stephen Anthony, Wirral, Great Britain
Mcmillan, Ian Robert, Wirral, Great Britain
PI US 2001033854 A1 20011025
AI US 2001-764734 A1 20010117 (9)
PRAI GB 2000-1133 20000118
GB 2000-1132 20000118
DT Utility
FS APPLICATION
LREP UNILEVER, PATENT DEPARTMENT, 45 RIVER ROAD, EDGEWATER, NJ, 07020
CLMN Number of Claims: 27
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1229
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Anti-microbial compositions for use on the outer surface of the human body or on apparel worn in close proximity thereto comprising a carrier material and a salt of a transition **metal chelator** comprising a transition **metal chelator** anion and particular organic cations. The **chelator** salts possess great formulation flexibility, being compatible with a wide range of other materials, and are believed to function by inhibiting the up-take of essential transition **metal** nutrients by microbes. Preferred **chelators** have high affinity for iron (III).

L12 ANSWER 31 OF 42 USPATFULL on STN
AN 90:98514 USPATFULL
TI Novel **bacteriocin** compositions for use as enhanced broad range bactericides and methods of preventing and treating microbial infection
IN Blackburn, Peter, New York, NY, United States
Gusik, Sara-Ann, New York, NY, United States
Polak, June, New York, NY, United States
Rubino, Stephen D., New York, NY, United States
PA Public Health Research Institute of the City of New York, New York, NY, United States (U.S. corporation)
PI US 4980163 19901225
AI US 1989-317627 19890301 (7)

DT Utility
FS Granted
EXNAM Primary Examiner: Schain, Howard E.; Assistant Examiner: Koh, Choon
LREP White & Case
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 445

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Broad range **bacteriocin** compositions are provided. The compositions can be dissolved or suspended in a suitable solvent or matrix and are more active towards a broader range of bacteria than are any of the component parts. The dissolved or suspended compositions constitute enhanced broad range bactericides. The compositions include lysostaphin and a **lanthionine** containing peptide **bacteriocin**; lysostaphin, a **lanthionine** containing peptide **bacteriocin** and a **chelating** agent; and lysostaphin, a **lanthionine** containing peptide, a **chelating** agent and a surfactant. Each component is present in the enhanced broad range bactericide in sufficient amount such that the bactericide is more effective against staphylococci than is lysostaphin alone and is more effective at treating and preventing a broad range of microbial infections. Methods of treating bacterial infections using said compositions and bactericides are provided.

L12 ANSWER 41 OF 42 TOXCENTER COPYRIGHT 2004 ACS on STN

AN 1988:92584 TOXCENTER

CP Copyright 2004 BIOSIS

DN PREV198886086696

TI BINDING OF **COPPER**-II AND OTHER **METAL** IONS BY
LYSINOALANINE AND RELATED COMPOUNDS AND ITS SIGNIFICANCE FOR FOOD SAFETY

AU PEARCE K N [Reprint author]; FRIEDMAN M

CS WESTERN REGIONAL RES CENT, US DEP AGRIC-AGRIC RES SERV, 800 BUCHANAN ST,
ALBANY, CALIF 94710, USA

SO Journal of Agricultural and Food Chemistry, (1988) Vol. 36, No. 4, pp.
707-717.

CODEN: JAFCAU. ISSN: 0021-8561.

DT Article

FS BIOSIS

OS BIOSIS 1988:424084

LA ENGLISH

ED Entered STN: 20011116

Last Updated on STN: 20011116

AB Acid-base equilibrium constants for the five ionizable groups and **metal** ion (Ca²⁺, Mn²⁺, Fe²⁺, Co²⁺, Ni²⁺, Cu⁺, Cu²⁺, Zn²⁺, Cd²⁺, Hg²⁺) binding constants of Nε-(2-amino-2-carboxyethyl)-L-lysine (lysinoalanine, LAL) have been determined at 25°C and 0.16 M ionic strength by potentiometric titration. Less extensive data are reported for the related compounds DL-2,3-diaminopropanoic acid (DAPA), 3-[(2-phenylethyl)amino]-DL-alanine (PEAA), and L-**lanthionine** (**LAN**), three other unnatural amino acids also formed during food processing. These unnatural amino acids are sufficiently strong **chelators** to influence **copper** transport by histidine in vivo at plasma levels of 49 μM LAL, 23 μM DAPA, 243 μM PEAA, and 511 μM **LAN**. Relatively high concentrations of these compounds are calculated to be necessary for competitive binding of essential **zinc** ions and inactivation of carboxypeptidase A and other enzymes. Possible mechanisms for kidney damage by these dehydroalanine-derived **copper chelators** are discussed.